

**REMARKS**

Claims 2-5, 7, 8, 10-28, 30, 34, 35, 42, 43, 45, and 54 are pending. Claims 1, 6, 9, 29, 31-33, 36-41, 44, and 46--53 have been canceled without prejudice and without acquiescence. Claim 7 is an independent claim. Claim 7 has been amended to incorporate the subject matter of former claim 9. Support for this subject matter can be found in the specification, for example, on page 13, lines 15-22. Applicants assert that no new matter has been added. Applicants reserve the right to pursue amended and or canceled material in other prosecution.

The issues outstanding in this application are as follows:

- Claims 2-5, 7, 8, 10-13, 18-23, 28, 34-36, 42, 43, 47 and 54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo in view of Zimmer et al. and Karger et al.
- Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claim 7, and further in view of Regnier et al.
- Claims 14 and 24-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claims 7 and 20, and further in view of Bergstrom et al.
- Claims 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claim 11, and further in view of Malmsten et al.
- Claim 30 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claim 7, and further in view of Regnier et al.
- Claim 45 was rejected under 35 U.S.C. § 103(a) being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claim 35, and further in view of Deacher et al.

- Claims 7 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Karger et al. in view of Zimmer et al. and Van Alstine.

Applicant respectfully traverses the outstanding rejections, and applicant respectfully requests reconsideration and withdrawal thereof in light of the amendments and remarks contained herein.

## II. Issues Under 35 USC 103(a)

### A. Claims 2-5, 7, 8, 10-13, 18-23, 28, 34-36, 42, 43, 47 and 54

Claims 2-5, 7, 8, 10-13, 18-23, 28, 34-36, 42, 43, 47 and 54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo in view of Zimmer et al. and Karger et al. Applicant respectfully traverses.

Solely in order to advance the prosecution of this case, and not in response to any rejections, Applicant has amended claim 7 to incorporate the limitations of claim 9. Applicant therefore respectfully notes that the rejections of claims 2-5, 7, 8, 10-13, 18-23, 28, 34-36, 42, 43, 47 and 54 under 35 U.S.C. § 103(a) (as being unpatentable over Amigo in view of Zimmer et al. and Karger et al.) is now moot, as these rejections were based upon claim 7, and its dependent claims, excluding claim 9. Therefore, since the subject matter of claim 9 is now a part of independent claim 7, these rejections are moot.

### B. Claim 9

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claim 7, and further in view of Regnier et al.

Since former claim 9 was dependent from claim 7, the above-noted rejection now applies to amended claim 7. Applicant respectfully traverses.

The primary reference to this rejection is Amigo, since the basis of the rejection was “Amigo, Zimmer et al., and Karger et al. as applied to claim 7 (wherein Amigo was the primary reference (e.g., “Amigo in view of Zimmer et al. and Karger et al.”)). The Examiner then further adds Regnier et al. as an additional secondary reference.

The subject matter of claim 9 is patentable because Amigo does not teach all the limitations of the claimed invention, and one skilled in the art at the time of the invention would not be motivated to combine Amigo with the other cited references.

Amigo exclusively and strongly discloses a device where electrokinetic transport is the only mode of fluid transport within the device. In fact, electrokinetic transport is such a key aspect of Amigo that the title of the patent is “Surface Modified Electrophoretic Chambers.”

Applicant asserts that to one of skill in the art, there is nothing in Amigo that suggests using any other means of fluid transport of reactants/solutes between different functional parts within a microfluidic device. To one skilled in the art, the Amigo reference teaches electrokinetic transport, and from this teaching one would have no motivation to use any other means of transport of fluids (including reactants and solutes) within a microfluidic device. Indeed, were one to substitute into Amigo a different form of transport from electrophoretic transport, as the Examiner suggests, it would totally change the key teaching of the reference. It is not obvious to replace the key feature of a prior art reference such that the entire teaching (including the key aspect of the invention) of the reference is changed.

Therefore, Applicant respectfully submits that the above-discussed rejection is traversed and claim 9 is allowable.

C. Claims 14 and 24-26

Claims 14 and 24-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claims 7 and 20, and further in view of Bergstrom et al. Applicant respectfully traverses.

The primary reference to this rejection is Amigo, since the basis of the rejection was “Amigo, Zimmer et al., and Karger et al. as applied to claims 7 and 20 (wherein Amigo was the primary reference (e.g., “Amigo in view of Zimmer et al. and Karger et al.”). The Examiner then further adds Bergstrom et al. as an additional secondary reference.

The subject matter of claims 14 and 24-26 is patentable because Amigo does not teach all the limitations of the claimed invention, and one skilled in the art at the time of the invention would not be motivated to combine Amigo with the other cited references.

Amigo exclusively and strongly discloses a device where electrokinetic transport is the only mode of fluid transport within the device. Applicant asserts that to one of skill in the art, there is nothing in Amigo that suggests using any other means of fluid transport of reactants/solutes between different functional parts within a microfluidic device. To one skilled in the art, the Amigo reference teaches electrokinetic transport, and from this teaching one would have no motivation to use any other means of transport of fluids (including reactants and solutes) within a microfluidic device. In fact, electrokinetic transport is such a key aspect of Amigo that the title of the patent is "Surface Modified Electrophoretic Chambers." Indeed, were one to substitute into Amigo a different form of transport from electrophoretic transport, as the Examiner suggests, it would totally change the key teaching of the reference. It is not obvious to replace the key feature of a prior art reference such that the entire teaching (including the key aspect of the invention) of the reference is changed.

Therefore, Applicant respectfully submits that the above-discussed rejection is traversed and that claims 14 and 24-26 are allowable.

D. Claims 15-17

Claims 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claim 11, and further in view of Malmsten et al. Applicant respectfully traverses.

The primary reference to this rejection is Amigo, since the basis of the rejection was "Amigo, Zimmer et al., and Karger et al. as applied to claim 11 (wherein Amigo was the primary reference (e.g., "Amigo in view of Zimmer et al. and Karger et al.")). The Examiner then further adds Malmsten et al. as an additional secondary reference.

The subject matter of claim 15-17 is patentable because Amigo does not teach all the limitations of the claimed invention, and one skilled in the art at the time of the invention would not be motivated to combine Amigo with the other cited references.

Amigo exclusively and strongly discloses a device where electrokinetic transport is the only mode of fluid transport within the device. Applicant asserts that to one of skill in the art, there is nothing in Amigo that suggests using any other means of fluid transport of reactants/solutes between different functional parts within a microfluidic device. To one skilled in the art, the Amigo reference teaches electrokinetic transport, and from this teaching one would have no motivation to use any other means of transport of fluids (including reactants and solutes) within a microfluidic device. In fact, electrokinetic transport is such a key aspect of Amigo that the title of the patent is "Surface Modified Electrophoretic Chambers." Indeed, were one to substitute into Amigo a different form of transport from electrophoretic transport, as the Examiner suggests, it would totally change the key teaching of the reference. It is not obvious to replace the key feature of a prior art reference such that the entire teaching (including the key aspect of the invention) of the reference is changed.

Therefore, Applicant respectfully submits that the above-discussed rejection is traversed and that claims 15-17 are allowable.

E. Claim 30

Claim 30 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claim 7, and further in view of Regnier et al. Applicant respectfully traverses.

The primary reference to this rejection is Amigo, since the basis of the rejection was "Amigo, Zimmer et al., and Karger et al. as applied to claim 7 (wherein Amigo was the primary reference (e.g., "Amigo in view of Zimmer et al. and Karger et al.")). The Examiner then further adds Regnier et al. as an additional secondary reference.

The subject matter of claim 30 is patentable because Amigo does not teach all the limitations of the claimed invention, and one skilled in the art at the time of the invention would not be motivated to combine Amigo with the other cited references.

Amigo exclusively and strongly discloses a device where electrokinetic transport is the only mode of fluid transport within the device. Applicant asserts that to one of skill in the art, there is nothing in Amigo that suggests using any other means of fluid transport of

reactants/solutes between different functional parts within a microfluidic device. To one skilled in the art, the Amigo reference teaches electrokinetic transport, and from this teaching one would have no motivation to use any other means of transport of fluids (including reactants and solutes) within a microfluidic device. In fact, electrokinetic transport is such a key aspect of Amigo that the title of the patent is "Surface Modified Electrophoretic Chambers." Indeed, were one to substitute into Amigo a different form of transport from electrophoretic transport, as the Examiner suggests, it would totally change the key teaching of the reference. It is not obvious to replace the key feature of a prior art reference such that the entire teaching (including the key aspect of the invention) of the reference is changed.

Therefore, Applicant respectfully submits that the above-discussed rejection is traversed and that claim 30 is allowable.

F. Claim 45

Claim 45 was rejected under 35 U.S.C. § 103(a) being unpatentable over Amigo, Zimmer et al., and Karger et al. as applied to claim 35, and further in view of Deacher et al. Applicant respectfully traverses.

The primary reference to this rejection is Amigo, since the basis of the rejection was "Amigo, Zimmer et al., and Karger et al. as applied to claim 35 (wherein Amigo was the primary reference (e.g., "Amigo in view of Zimmer et al. and Karger et al.")). The Examiner then further adds Deacher et al. as an additional secondary reference.

The subject matter of claim 45 is patentable because Amigo does not teach all the limitations of the claimed invention, and one skilled in the art at the time of the invention would not be motivated to combine Amigo with the other cited references.

Amigo exclusively and strongly discloses a device where electrokinetic transport is the only mode of fluid transport within the device. Applicant asserts that to one of skill in the art, there is nothing in Amigo that suggests using any other means of fluid transport of reactants/solutes between different functional parts within a microfluidic device. To one skilled in the art, the Amigo reference teaches electrokinetic transport, and from this teaching one would have no motivation to use any other means of transport of fluids (including

reactants and solutes) within a microfluidic device. In fact, electrokinetic transport is such a key aspect of Amigo that the title of the patent is "Surface Modified Electrophoretic Chambers." Indeed, were one to substitute into Amigo a different form of transport from electrophoretic transport, as the Examiner suggests, it would totally change the key teaching of the reference. It is not obvious to replace the key feature of a prior art reference such that the entire teaching (including the key aspect of the invention) of the reference is changed.

Therefore, Applicant respectfully submits that the above-discussed rejection is traversed and that claim 45 is allowable.

G. Claims 7 and 27

Claims 7 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Karger et al. in view of Zimmer et al. and Van Alstine. Applicants respectfully traverse.

Karger et al. is the primary reference. The subject matter of claims 7 and 27 is patentable because Karger et al. does not teach all the limitations of the claimed invention, and one skilled in the art at the time of the invention would not be motivated to combine Karger et al with the other cited references.

First, Karger et al. exclusively discloses a device where capillary electrophoresis or high pressure liquid chromatography (HPLC) are the only means to transport fluid within the device. Applicant asserts that to one of skill in the art, there is nothing in Karger et al. that suggests using any other means of fluid transport of reactants/solutes between different functional parts within a microfluidic device.

Second, and additionally, Karger et al. does not describe or suggest the claimed functional parts of claims 7 and 27. As the capillaries are described in Karger et al., there is no place for the claimed volume-defining unit, mixing cavity, or a waste cavity. Applicant therefore asserts that to one of skill in the art, there is nothing in Karger et al. that suggests adding the claimed functional parts of claims 7 and 27.

Therefore, Applicant respectfully submits that the above-discussed rejection is traversed and that claims 7 and 27 are allowable.

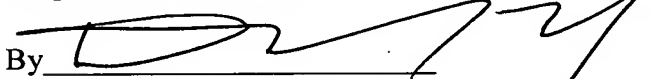
In view of the above, applicant believes the pending application is in condition for allowance.

Applicant respectfully requests a three month extension of time in which to file this Response and Amendment. A check for the requisite amount is attached hereto. If any other fees are due, please charge our Deposit Account No. 06-2375, under Order No. HO-P02378US0 from which the undersigned is authorized to draw.

Since the Office Action was mailed on September 21, 2005, with the request for a three month extension of time and payment of the required fees, this response is timely being filed by March 21, 2006.

Dated: March 21, 2006

Respectfully submitted,

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